

## SEVERE HYPERTENSION

An elevated blood pressure reading in emergency patients is not uncommon and usually is not by itself an emergency. The goals of pre-hospital treatment should be focused on the following: prevent a neurologic or cardiovascular catastrophe, rapidly identify those patients who are in a hypertensive crisis and the body system(s) affected or potentially affected, and control symptomatic elevated blood pressure in certain situations.

**This protocol is only applicable to patients with hypertensive crisis without signs and symptoms of stroke.**

Specific problems such as chest pain, pulmonary edema, and preeclampsia/eclampsia should be treated per appropriate protocols. Drug therapy shall be considered in careful consultation **with the Medical Command Physician.**

- A. Perform **Initial Treatment / Universal Patient Care Protocol**
- B. Systolic BP > 240 mm/Hg and/or Diastolic BP > 120 mm/Hg taken manually and repeated in opposing arms.

Patient may exhibit one or more of the following symptoms:

- 1. Chest pain
  - 2. Seizures
  - 3. Focal motor deficits
  - 4. Changes in mental status
  - 5. Decreased or blurred vision
  - 6. Shortness of breath
  - 7. Headache
- C. Cardiovascular problems such as angina, acute CHF, and aortic dissection may also be the presenting symptoms. Patients with suspected cocaine overdose or alcohol withdrawal may exhibit similar symptoms.

**Note:** *HYPERTENSION IS ALSO A NEUROPROTECTIVE REFLEX IN THE SETTING OF TRAUMATIC BRAIN INJURY OR INCREASED INTRACRANIAL PRESSURE. GREAT CAUTION MUST BE EXERCISED IN ADMINISTERING ANTI-HYPERTENSIVE AGENTS.*

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- D. Specific symptoms such as chest pain, CHF, etc. should be treated per appropriate protocol.
- E. Treatment goal: reduce MAP by 10 - 15% of initial value. **DO NOT** reduce BP to normal range (i.e. 120 / 80) as it may lead to a decrease in cerebral perfusion.

Measure blood pressure manually every five (5) minutes. If two (2) successive readings have a systolic > 240 or a diastolic >120 mmHg, consider intervention **if symptomatic per MCP order**.

### **Labetalol (Trandate®)** (*first line medication*)

Initial: 10 mg slow IV push over 2 minutes.

Repeat in 10 minutes at 20 mg if BP remains > 180/120 and symptoms remain.

**ALERT: CAUTION IN PATIENTS WITH ASTHMA AND COPD DUE TO BETA BLOCKING ACTIVITY**

-OR-

### **Nitroglycerin** (*second line medication*)

0.4 mg SL every 3 - 5 minutes.

Repeat if BP remains > 200/120 mm/Hg and symptoms remain (max. dose 1.2 mg).

CONSIDER NITROGLYCERIN AS A FIRST LINE ANTIHYPERTENSIVE IN THE SETTING OF HYPERTENSIVE CRISIS WITH CHEST PAIN OR ISCHEMIC EKG CHANGES.

-OR-

### **Morphine Sulfate** (*third line medication*)

2 - 10 mg IVP or IM

